



Analysis of the Relationship between Parenting Patterns and Supplementary Feeding on Stunting Incidence in Gedungboyountung Village

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OPEN ACCESS

ISSN 2548-2246 (online)

ISSN 2442-9139 (print)

Edited by:

Roseline Florence Gomez

Reviewed by:

Nidatul Khoftiyah

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Received: 22 Sep 2025

Accepted: 31 Oct 2025

Published: 31 Oct 2025

Citation:

Siti Sholikha, Husnul Muthoharoh, Dellamitha Arifiah Muslim, Hibatun Mubarakah El Fitri (2025) Analysis of the Relationship between Parenting Patterns and Supplementary Feeding on Stunting Incidence in Gedungboyountung Village

Midwiferia Jurnal Kebidanan. 11:2.

doi:

10.21070/midwiferia.v11i2.1749

Stunting is a persistent public health problem in Indonesia, particularly in rural communities, and is influenced by caregiving practices and dietary patterns. This study aimed to analyze the association between parenting practices, supplementary feeding (PMT), and the incidence of stunting among children aged 6–59 months in Gedungboyountung Village. A cross-sectional analytic design was conducted from June to August 2025 with 60 respondents selected through purposive sampling. Parenting and feeding practices were assessed using structured questionnaires, while stunting was determined based on height-for-age z-scores. Data were analyzed using the Chi-square test. The findings showed that 8.3% (5 children) were stunted. A significant association was observed between parenting practices and stunting ($p = 0.028$), indicating that children raised with poor parenting were more likely to be stunted. Supplementary feeding was also significantly associated with stunting ($p = 0.014$), with inappropriate or low-quality feeding practices increasing the risk of growth faltering. These results suggest that stunting in rural areas is strongly linked to behavioral and caregiving factors, especially the adequacy of food provision and the quality of parenting. Strengthening community-based health education programs to improve parenting skills and ensure appropriate supplementary feeding may serve as effective strategies to reduce stunting prevalence. Further studies with larger sample sizes and longitudinal approaches are recommended to confirm these findings and to explore additional determinants such as socioeconomic conditions, maternal education, and sanitation.

Keywords: stunting, parenting, supplementary feeding, toddlers

INTRODUCTION

Stunting remains one of the major nutritional problems in Indonesia and has a significant impact on the quality of human resources in the future. Stunting is defined as a condition of impaired growth in children under five, indicated by height-for-age being below minus two standard deviations according to the WHO growth standard. This condition occurs due to prolonged nutritional deficiencies, recurrent infections, and lack of psychosocial stimulation, especially during the first 1,000 days of life (Septiliyana & Aryanti, 2022). Data from the Indonesian Basic Health Research (Riskesdas) shows that the prevalence of stunting in Indonesia is still high, making it one of the highest in Southeast Asia. The long-term impact of stunting is not only limited to physical growth retardation but also affects cognitive development, reduces academic achievement, decreases productivity, and increases the risk of non-communicable diseases in adulthood (Meku & Hambur, 2025; Susanti, 2024; Virginia et al., 2020).

The causes of stunting are multifactorial and interrelated. Direct factors include inadequate nutritional intake and infectious diseases, while indirect factors involve parenting practices, access to health services, environmental conditions, and family socioeconomic status (Ritanti & Evanda, 2025). Parenting practices, especially those of mothers, play an essential role in meeting nutritional needs, providing developmental stimulation, and maintaining children's hygiene. Previous studies have shown that inappropriate parenting practices increase the risk of stunting because children do not receive adequate nutrition, are not properly cared for when sick, and lack developmental stimulation (Ka'bah & Yuliana, 2024).

In addition to parenting practices, supplementary feeding (PMT) is also an important factor in stunting prevention. Proper supplementary feeding, both in terms of quality and quantity, can help meet children's nutritional needs that are not fulfilled by staple foods (Aprianti, 2023). However, in many cases, supplementary feeding does not meet nutritional standards, is insufficient in portion size, or is dominated by instant foods that do not align with children's needs. Studies have shown that inappropriate supplementary feeding is closely related to the incidence of stunting in children (Amilia et al., 2025).

Gedungboyountung Village is one of the areas in Indonesia still struggling with stunting among toddlers. Social, economic, and cultural factors in this village influence both parenting practices and supplementary feeding behaviors. Considering the importance of children's growth period and the long-term consequences of stunting, it is crucial to analyze the relationship between parenting practices and supplementary feeding with the incidence of stunting in Gedungboyountung Village.

The results of this study are expected to contribute to stunting prevention and control efforts at the

family, community, and village government levels. Furthermore, this research can serve as a basis for designing more targeted interventions, such as parenting education, improving the quality of supplementary feeding, and strengthening community health programs at the village level. In this way, the national target of reducing stunting prevalence can be achieved, in line with government programs to build a healthy, intelligent, and productive generation in Indonesia.

METHODOLOGY

This study employed an analytical quantitative design with a cross-sectional approach. The research was conducted in Gedungboyountung Village, Turi Sub-district, Lamongan Regency, over a three-month period (June–August 2025). The study population consisted of all children aged 6–59 months, with a minimum sample of 60 respondents selected using a purposive sampling technique. Inclusion criteria: children aged 6–59 months residing in Gedungboyountung Village; Mothers or primary caregivers who have lived in the village for ≥ 6 months; Mothers willing to participate and provide informed consent; and Children with complete anthropometric data (height and age). Exclusion criteria: Children with congenital abnormalities or chronic diseases that affect growth (e.g., congenital heart disease, Down syndrome); Families not present during data collection; Respondents who did not complete the questionnaire or refused anthropometric measurement.

The independent variables were parenting practices and supplementary feeding (PMT), while the dependent variable was stunting incidence. Data were collected using a structured questionnaire and anthropometric measurements of children’s height with a stadiometer, which were then compared to the WHO Height-for-Age Z-score (HAZ) standard.

Data analysis was performed using univariate analysis to describe respondent characteristics and bivariate analysis with the chi-square test to examine the relationship between parenting, supplementary feeding, and stunting incidence.

RESULT AND DISCUSSION

Table 1. Analysis Parenting Patterns and Supplementary Feeding on Stunting Incidence in Gedungboyountung Village

Variable	Category	Frequency (n)	Percentage (%)
Child’s Sex	Male	32	53,3
	Female	28	46,7
Age	<24 months	21	35,0
	≥ 24 -59 months	39	65,0

Exclusive Breastfeeding	Yes	32	53,3
	No	28	46,7
Stunting Status	Stunted	5	8,3
	Not Stunted	55	91,7
Parenting Pattern	Good	35	58,3
	Poor	25	41,7
Supplementary Feeding	Appropriate	20	55,0
	Inappropriate	27	45,0

This study involved 60 children aged 6–59 months in Gedungboyountung Village. The majority were aged 24–59 months (65.0%), with 53.3% male and 46.7% female. Among 60 respondents, 32 children (53.3%) received exclusive breastfeeding, while 28 children (46.7%) did not. Out of 60 children, 5 (8.3%) were classified as stunted, while the majority, 55 children (91.7%), were not stunted.

Among children from mothers with good parenting patterns, only 1 child (2.9%) was stunted. In contrast, 4 children (16.0%) with poor parenting were stunted. Children who received appropriate supplementary feeding had a lower prevalence of stunting (3.0%) compared to those with inappropriate supplementary feeding (14.8%).

Table 2. Analysis of the Relationship between Parenting Patterns and Supplementary Feeding on Stunting Incidence in Gedungboyountung Village

Variable	Category	Stunted (n=5)	Not Stunted (n=55)	p-value
Parenting Pattern	Good	1	34	0.028
	Poor	4	21	
Supplementary Feeding (PMT)	Appropriate	1	19	0.014
	Inappropriate	4	23	

Out of 60 respondents, 5 children (8.3%) were identified as stunted. The majority of mothers demonstrated good parenting (58.3%), and more than half provided appropriate supplementary feeding (55.0%). Cross-tabulation analysis revealed that stunting was more prevalent among children with poor parenting (16.0%) and those receiving inappropriate supplementary feeding (14.8%). Chi-square analysis confirmed significant associations between parenting patterns and stunting ($p = 0.028$), as well as between supplementary feeding and stunting ($p = 0.014$).

Discussion

The occurrence of stunting was significantly associated with parenting patterns, supplementary feeding (PMT), and exclusive breastfeeding. Children raised with poor parenting practices had a higher prevalence of stunting compared to those with good parenting (Lubis & Lubis, 2023). This finding aligns with research in East Nusa Tenggara which reported that inappropriate caregiving practices, such as irregular feeding and inadequate health care during illness, contribute significantly to stunting. Parenting is a crucial factor in ensuring children's nutritional intake, hygiene, and psychosocial stimulation, all of which support optimal growth (Sari & Maigoda, 2023; Susanti, 2024).

In terms of supplementary feeding, this study demonstrated that children receiving inappropriate PMT were more likely to be stunted. The quality, frequency, and diversity of complementary foods play a central role in supporting linear growth (Aprianti, 2023). A study conducted in Sigi Regency similarly found that poor dietary diversity and feeding frequency were closely associated with higher stunting rates. This suggests that interventions on PMT should emphasize both the nutritional adequacy and the consistency of food provision (A'ini et al., 2024).

Exclusive breastfeeding was also shown to have a protective effect. Children who were not exclusively breastfed were more likely to experience stunting compared to those who were exclusively breastfed. This finding supports evidence from Jombang and Pasuruan, where exclusive breastfeeding was strongly correlated with lower stunting prevalence. Exclusive breastfeeding provides essential nutrients and immunity during the critical first six months, reducing vulnerability to infections and malnutrition (Muthoharoh, 2021; Sulikah et al., 2024).

Overall, this study highlights that stunting is influenced by interrelated behavioral and caregiving practices. Effective interventions should therefore integrate parenting education, the promotion of adequate PMT, and strengthening of exclusive breastfeeding practices.

However, this study has several limitations. The cross-sectional design prevents establishing causality, the sample size was relatively small, and the reliance on self-reported data may introduce recall bias. Future research with larger samples and longitudinal designs is needed to confirm these associations and to explore additional contributing factors such as household income, maternal education, and sanitation.

CONCLUSION

Parenting patterns, supplementary feeding (PMT), and exclusive breastfeeding were found to have significant associations with stunting incidence. Children with poor parenting practices, inappropriate PMT, and non-exclusive breastfeeding were more likely to experience stunting compared to those who

received proper care, adequate supplementary food, and exclusive breastfeeding. These findings highlight the importance of strengthening community-based interventions through health education, promotion of exclusive breastfeeding, and improvement of complementary feeding practices. Furthermore, empowering parents to adopt appropriate caregiving behaviors is essential to prevent stunting and support optimal child growth. Future research with larger sample sizes and longitudinal approaches is recommended to further explore causal relationships and additional contributing factors such as socioeconomic status, maternal education, and sanitation.

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